## REMARKS

In the Office Action, the Examiner rejected claims 1-6 and 12-41 under 35 U.S.C. §

102(e) as anticipated by Shanahan et al. (U.S. Patent No. 6,820,075); rejected claims 7 and 8

under 35 U.S.C. § 103(a) as unpatentable over Shanahan et al.; and rejected claims 9-11 under 35

U.S.C. § 103(a) as unpatentable over Shanahan et al. in view of Risvik (U.S. Patent No.

6,377,945).

By this Amendment, Applicants cancel claims 8, 20, 23, 33-40, and 42 without prejudice

or disclaimer, amend claims 1-7, 9-12, 14-16, 18, 19, 21, 22, 24-32, and 41 to improve form, and

add new claims 43 and 44. No new matter has been added. Claims 1-7, 9-19, 21, 22, 24-32, 41,

43, and 44 are pending.

*REJECTION UNDER 35 U.S.C. § 102(e) BASED ON SHANAHAN ET AL.*

In paragraph 3 of the Office Action, the Examiner rejected pending claims 1-6, 12-19, 21,

22, 24-32, and 41 under 35 U.S.C. § 102(e) as allegedly anticipated by Shanahan et al.

Applicants respectfully traverse the rejection with regard to the claims as presented herein.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach every

aspect of the claimed invention. Any feature not directly taught must be inherently present. In

other words, the identical invention must be shown in as complete detail as contained in the

claim. See M.P.E.P. § 2131. Shanahan et al. does not disclose or suggest the combination of

features recited in claims 1-6, 12-19, 21, 22, 24-32, and 41.

Amended independent claim 1, for example, is directed to a method that comprises

obtaining a text fragment; performing a search, based, at least in part, on the text fragment, to

identify one or more documents; identifying sentences within the one or more documents that

include the text fragment; determining sentence endings as text that is located within the identified sentences between the text fragment and an end of the identified sentences; assigning scores to the sentence endings based, at least in part, on a location within the identified sentences at which the text fragment occurs; and presenting the sentence endings as potential completions for the text fragment based, at least in part, on the scores.

Shanahan et al. does not disclose or suggest the combination of features recited in amended claim 1. For example, Shanahan et al. does not disclose or suggest assigning scores to sentence endings, which include text that is located within identified sentences between a text fragment and an end of the identified sentences, based, at least in part, on a location within the identified sentences at which the text fragment occurs. Instead, Shanahan et al. discloses ranking matched items based on their level of appropriateness for completion (i.e., how well they satisfy the query constraints and possibly additional constraints such as how near each matched item is to a previously completed item) (col. 59, lines 27-32). There is nothing in Shanahan et al. that discloses or remotely suggests assigning scores to sentence endings based, at least in part, on a location within identified sentences at which the text fragment occurs.

With regard to the rejection of claim 23 (which is canceled herein), the Examiner alleged that Shanahan et al. discloses that the sentence endings are scored based, at least in part, on a location of where the text fragment occurs within the identified sentences and cited column 58, lines 19-21, of Shanahan et al. for support (Office Action, page 7). Applicants submit that the disclosure of Shanahan et al. provides no support for the Examiner's allegation.

At column 58, lines 19-21, Shanahan et al. discloses a location weight factor within an equation that indicates: $weight_{location}\left(1-\dfrac{location\ of\ word}{document\ length}\right)$. Shanahan et al. further discloses

that certain factors can be used to determine the utility of inserting an entity into an entity completion database (i.e., an entity with a utility above a threshold is selected and inserted into the entity completion database) (col. 57, line 66 - col. 58, line 7). One of these factors is the location weight factor that reflects the location of the entity in the document (col. 58, line 2). This disclosure of Shanahan et al. is deficient for multiple reasons.

For example, even assuming, for the sake of argument, that the entity can be equated to a sentence ending (a point that Applicants do not concede), Shanahan et al. does not disclose or remotely suggest using the location of the entity in a document to assign a score to the entity to determine how to present that entity as a potential completion for a text fragment. Instead, Shanahan et al. specifically discloses using this location of the entity to determine whether the entity should be included in an entity completion database. Thus, Shanahan et al. does not disclose or suggest assigning scores to sentence endings, which include text that is located within identified sentences between a text fragment and an end of the identified sentences, based, at least in part, on a location within the identified sentences at which the text fragment occurs, as recited in claim 1.

Also, Shanahan et al. does not disclose or remotely suggest the location of a text fragment within a sentence of a document. Instead, Shanahan et al. specifically discloses the location of a word within a document (col. 58, lines 19-21). Thus, Shanahan et al. does not disclose or suggest assigning scores to sentence endings, which include text that is located within identified sentences between a text fragment and an end of the identified sentences, based, at least in part, on a location within the identified sentences at which the text fragment occurs, as recited in claim 1.

For at least these reasons, Applicants submit that claim 1 is not anticipated by <u>Shanahan</u> <u>et al.</u> Claims 2-6, 12-19, 21, 22, and 24-29 depend from claim 1 and are, therefore, not anticipated by <u>Shanahan et al.</u> for at least the reasons given with regard to claim 1.

Amended independent claim 30 is directed to a system that comprises means for receiving a text fragment; means for identifying documents that include the text fragment; means for locating sentences within the documents that include at least some of the text fragment; means for identifying sentence endings associated with the located sentences; means for assigning scores to the sentence endings based, at least in part, on a measure of popularity associated with the sentence endings; and means for presenting the sentence endings as potential completions for the text fragment based, at least in part, on the scores.

<u>Shanahan et al.</u> does not disclose or suggest the combination of features recited in amended claim 30. For example, <u>Shanahan et al.</u> does not disclose or suggest means for assigning scores to sentence endings, associated with located sentences within documents that include at least some of a text fragment, based, at least in part, on a measure of popularity associated with the sentence endings. Instead, <u>Shanahan et al.</u> discloses ranking matched items based on their level of appropriateness for completion (i.e., how well they satisfy the query constraints and possibly additional constraints such as how near each matched item is to a previously completed item) (col. 59, lines 27-32). There is nothing in <u>Shanahan et al.</u> that discloses or remotely suggests means for assigning scores to sentence endings based, at least in part, on a measure of popularity associated with the sentence endings.

With regard to the rejection of claim 21, the Examiner alleged that <u>Shanahan et al.</u> discloses that the sentence endings are scored based on popularity and cited column 58, lines 25-

27, of <u>Shanahan et al.</u> for support (Office Action, page 7). Applicants submit that the disclosure of <u>Shanahan et al.</u> provides no support for the Examiner's allegation.

At column 58, lines 25-27, <u>Shanahan et al.</u> discloses a corpus weight factor within an equation that indicates: $weight_{corpus}\left(\dfrac{frequency\ of\ word\ occuring\ in\ corpus}{highest\ frequency\ of\ any\ word\ in\ corpus}\right)$. <u>Shanahan et al.</u> further discloses that certain factors can be used to determine the utility of inserting an entity into an entity completion database (i.e., an entity with a utility above a threshold is selected and inserted into the entity completion database) (col. 57, line 66 - col. 58, line 7). One of these factors is the corpus weight factor that reflects the frequency that an entity occurs in a corpus (col. 58, lines 2-3). This disclosure of <u>Shanahan et al.</u> is deficient.

For example, even assuming, for the sake of argument, that the entity can be equated to a sentence ending (a point that Applicants do not concede), <u>Shanahan et al.</u> does not disclose or remotely suggest using the frequency that the entity occurs in a corpus to assign a score to the entity to determine how to present that entity as a potential completion for a text fragment. Instead, <u>Shanahan et al.</u> specifically discloses using this frequency of the entity in a corpus to determine whether the entity should be included in an entity completion database. Thus, <u>Shanahan et al.</u> does not disclose or suggest means for assigning scores to sentence endings, associated with located sentences within documents that include at least some of a text fragment, based, at least in part, on a measure of popularity associated with the sentence endings, as recited in claim 30.

For at least these reasons, Applicants submit that claim 30 is not anticipated by <u>Shanahan et al.</u>

Amended independent claim 31 is directed to a system that comprises one or more servers configured to receive a text fragment, identify documents that include at least a portion of the text fragment, locate sentences within the documents that are associated with the text fragment, determine sentence completions associated with the located sentences, trim one of the sentence completions by dropping one or more words from the one of the sentence completions, and provide a plurality of the sentence completions including the trimmed sentence completion as potential completions for the text fragment.

Shanahan et al. does not disclose or suggest the combination of features recited in amended claim 31. For example, Shanahan et al. does not disclose or suggest one or more servers that are configured to trim one of the sentence completions, associated with located sentences within documents that are associated with a text fragment, by dropping one or more words from the one of the sentence completions.

With regard to the rejection of claim 13, the Examiner alleged that Shanahan et al. discloses trimming at least one sentence ending by dropping one or more words from the at least one sentence ending and cited column 60, lines 41-44, and column 57, lines 60-62, of Shanahan et al. for support (Office Action, pages 4-5). Applicants submit that the disclosure of Shanahan et al. provides no support for the Examiner's allegation.

At column 60, lines 41-44, Shanahan et al. discloses:

> Note that the entry or entries offered to the user may be one word, a phrase, all words
> until the end of a sentence, all words until the end of a paragraph, or some other grouping
> of words.

In this section, Shanahan et al. discloses that entries offered to the user may be a single word, all words to the end of a sentence, or all words to the end of a paragraph. Nowhere in this section, or elsewhere, does Shanahan et al. disclose or remotely suggest one or more servers that are

configured to trim a sentence completion by dropping one or more words from the sentence completion, as recited in claim 31.

At column 57, lines 60-62, Shanahan et al. discloses "[c]onsequently, words/phrases that occur very rarely may ignored by the auto-completion system." This section of Shanahan et al. simply discloses that the auto-completion system can ignore words and phrases that rarely occur. Nowhere in this section, or elsewhere, does Shanahan et al. disclose or remotely suggest one or more servers that are configured to trim a sentence completion by dropping one or more words from the sentence completion, as recited in claim 31.

The Examiner alleged that "cutting to a phrase completion from sentence require dropping" (Office Action, pages 4-5). The Examiner appears to be alleging that Shanahan et al. discloses determining sentence completions and then cutting these sentence completions to phrase completions. There is absolutely no support for this allegation in the disclosure of Shanahan et al. Instead, Shanahan et al. simply discloses that entries offered to the user may be a single word, all words to the end of a sentence, or all words to the end of a paragraph (col. 60, lines 41-44). There is absolutely no disclosure in Shanahan et al. that discloses or suggests that Shanahan et al. first starts by determining all words to the end of a sentence, then cutting these down to single words and phrases, as the Examiner appears to be alleging. Thus, the Examiner's allegation lacks merit.

For at least these reasons, Applicants submit that claim 31 is not anticipated by Shanahan et al. Claim 32 depends from claim 31 and is, therefore, not anticipated by Shanahan et al. for at least the reasons given with regard to claim 31.

Amended independent claim 41 is directed to a computer device that comprises a memory configured to store instructions; and a processor configured to execute the instructions in the memory to obtain a fragment of text, search for documents that include at least a portion of the fragment of text, identify sentences within the documents that include the at least the portion of the fragment of text, determine sentence completions as text located within the identified sentences between the at least the portion of the fragment of text and an end of the identified sentences, merge at least two of the sentence completions to form a single merged sentence completion, and provide a plurality of the sentence completions, including the merged sentence completion, as potential completions for the fragment of text.

Shanahan et al. does not disclose or suggest the combination of features recited in amended claim 41. For example, Shanahan et al. does not disclose or suggest a processor that is configured to merge at least two sentence completions, associated with identified sentences within documents that include at least a portion of a fragment of text, to form a single merged sentence completion.

With regard to the rejection of claim 17, the Examiner alleged that Shanahan et al. discloses merging two or more of the sentence endings into a merged sentence ending and cited column 56, lines 50-52, of Shanahan et al. for support (Office Action, page 6). Applicants submit that the disclosure of Shanahan et al. provides no support for the Examiner's allegation.

At column 56, lines 50-52, Shanahan et al. discloses:

> At 4512, if extracted entities are deemed to be appropriate for auto-completion, then they are indexed and inserted into the database of entities 4214

In this section, Shanahan et al. discloses that entities appropriate for auto-completion are indexed and inserted into a database. Nowhere in this section, or elsewhere, does Shanahan et al. disclose

or remotely suggest a processor that is configured to merge at least two sentence completions to form a single merged sentence completion, as recited in claim 41.

The Examiner alleged that indexing entities is equivalent to merging at least two sentence completions (Office Action, page 6). The Examiner failed to explain, however, how the act of indexing can reasonably be equated to merging at least two sentence completions to form a single merged sentence completion. Thus, the Examiner has failed to establish a proper rejection under 35 U.S.C. § 102.

For at least these reasons, Applicants submit that claim 41 is not anticipated by <u>Shanahan et al.</u>

Accordingly, Applicants submit that claims 1-6, 12-19, 21, 22, 24-32, and 41 are not anticipated by <u>Shanahan et al.</u> under 35 U.S.C. § 102. Thus, reconsideration and withdrawal of the rejection of claims 1-6, 12-19, 21, 22, 24-32, and 41 are respectfully requested.

*REJECTION UNDER 35 U.S.C. § 103(a) BASED ON <u>SHANAHAN ET AL.</u>*

In paragraph 5 of the Office Action, the Examiner rejected pending claim 7 under 35 U.S.C. § 103(a) as allegedly unpatentable over <u>Shanahan et al.</u> Applicants respectfully traverse the rejection.

Claim 7 depends from claim 1. Without acquiescing in the Examiner's rejection with regard to claim 7, Applicants submit that claim 7 is patentable over <u>Shanahan et al.</u> for at least the reasons given with regard to claim 1.

Accordingly, Applicants submit that claim 7 is patentable over <u>Shanahan et al.</u> under 35 U.S.C. § 103. Thus, reconsideration and withdrawal of the rejection of claim 7 are respectfully requested.

*REJECTION UNDER 35 U.S.C. § 103(a) BASED ON <u>SHANAHAN ET AL.</u> AND <u>RISVIK</u>*

In paragraph 6 of the Office Action, the Examiner rejected claims 9-11 under 35 U.S.C. § 103(a) as allegedly unpatentable over <u>Shanahan et al.</u> in view of <u>Risvik</u>. Applicants respectfully traverse the rejection.

Claims 9-11 depend from claim 1. Without acquiescing in the Examiner's rejection with regard to claims 9-11, Applicants submit that the disclosure of <u>Risvik</u> does not cure the deficiencies in the disclosure of <u>Shanahan et al.</u> identified above with regard to claim 1. Therefore, claims 9-11 are patentable over <u>Shanahan et al.</u> and <u>Risvik</u>, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 1.

Accordingly, Applicants submit that claims 9-11 are patentable over <u>Shanahan et al.</u> and <u>Risvik</u> under 35 U.S.C. § 103. Thus, reconsideration and withdrawal of the rejection of claims 9-11 are respectfully requested.

*NEW CLAIMS*

New claim 43 depends from claim 31, and new claim 44 depends from claim 41. Claims 43 and 44 are, therefore, patentable over the <u>Shanahan et al.</u> and/or <u>Risvik</u> for at least the reasons given with regard to claims 31 and 41.

*CONCLUSION*

In view of the foregoing amendments and remarks, Applicants respectfully request the Examiner's reconsideration of the application and the timely allowance of claims 1-7, 9-19, 21, 22, 24-32, 41, 43, and 44.

As Applicants' remarks with respect to the Examiner's rejections overcome the rejections, Applicants' silence as to certain assertions by the Examiner in the Office Action or

certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, assertions as to dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or that such requirements have been met, and Applicants reserve the right to dispute these assertions/requirements in the future.

If the Examiner believes that the application is not now in condition for allowance, Applicants respectfully request that the Examiner contact the undersigned to discuss any outstanding issues.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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